DMSMS Strategic Planning:
Discussion on the Path Forward

21 April 2010

Program Manager, DMSMS

Defense Standardization Program Office

Systems Engineering

Office of the Secretary of Defense

Support for Change

Weapon Systems Acquisition Reform Act of 2009 (Public Law 111-23)

- **Establishes *Director, Systems Engineering* as principal systems engineering advisor to the SECDEF and the USD(AT&L)**
- **Requires Congressional reporting on Systems Engineering Capabilities and MDAP achievement of measurable performance criteria**
- **WSARA signed into law 22 May 2009**
- **Director, Systems Engineering on board 21 Sep 2009**
- **Implementing DTM signed by USD(AT&L) 4 Dec 2009; Acquisition Guidance on-line 31 Jan 2010**
- **DoD Directive formalizing responsibilities of Director, Systems Engineering in development**
- **First annual WSARA SE / DT&E Joint Report delivered to Congress 31 Mar 2010**

President Barack Obama hands a pen to U.S. Rep. Robert Andrews (D-NJ) as he signs the Weapons Systems Acquisition Reform Act in the Rose Garden at the White House Friday, May 22, 2009. Standing from left are: Andrews, Rep. John McHugh (R-NY), Sen. Carl Levin (D-MI), Rep. Ike Skelton (D-MO) and Rep. Mike Conaway (R-TX). Official White House Photo by Samantha Appleton

MDAP- Major Defense Acquisition Program (USC 2430)

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DDR&E Imperatives

In July 2009, DDR&E introduced four Imperatives to focus the organization in support of the immediate and future needs of the Department of Defense:

1) Accelerate delivery of technical capabilities to win the current fight

2) Prepare for an uncertain future

3) Reduce the cost, acquisition time and risk of our major defense acquisition programs

4) Develop world class science, technology, engineering, and mathematics capabilities for the DoD and the Nation

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Systems Engineering Mission

- **Execute Substantive Technical Engagement Throughout the Acquisition Life Cycle with Major and Selected Acquisition Efforts Across DoD**
- **Apply Best Engineering Practices to:**
  - **Help program managers identify and mitigate risks**
  - **Shape technical planning and management**
  - Support and advocate for DoD Component initiatives
  - Provide technical insight to OSD stakeholders
  - Identify systemic issues for resolution above the program level
  - Suppor[illegible]g

The "E" in DDR&E

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Director, Systems Engineering

Director, Systems Engineering

Principal Deputy

Systems Analysis

Addressing Emerging Challenges on the Frontiers of Systems Engineering

Analysis of Complex Systems/Systems of Systems

Development Planning/Early SE

Program Protection/Acquisition Cyber Security

University and Industrial Engineering Research

Major Program Support

Supporting USD(AT&L) Decisions with Independent Engineering Expertise

Engineering Assessment / Mentoring of Major Defense Programs

Program Support Reviews

OIPT / DAB / ITAB Support

Systems Engineering Plans

Systemic Root Cause Analysis

Mission Assurance

Leading Systems Engineering Practice in DoD and Industry

Systems Engineering Policy, Guidance, and Standards

Specialty Engineering (System Safety, Reliability / Availability / Maintainability, Quality, **DMSMS**, Manufacturing, Producibility, Human Systems Integration (HSI))

Technical Workforce

Providing technical support and systems engineering leadership and oversight to USD(AT&L) in support of planned and ongoing acquisition programs

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Strategic Planning 101

- **Standard DoD Strategic Planning Template**
  - Vision (Future view of potential resolution)
    - Mission (Attainable overall charge)
      - Goals (Single element required to meet vision/mission)
        - » Objectives (List of targeted milestones)

- **Additionally Other Categories Can be Used to Help**
  - Principles / Thrusts can describe the broad strategic elements/direction of the mission.
  - Implementation of the strategy usually requires milestones, tasks / means and finally measures.
    - These are all parts of the strategy which help to put the strategy into practices and measure success. These are required if there is a cycle of assessment and adjustment.

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Past Strategic Planning

- **Formulate recommendations to DOD policy and procedures** that streamline regulations and practices to reduce DMSMS impacts and further encourage aggressive and proactive management of DOD systems by both Government and industry personnel.
- Promote the utilization of **DMSMS management best practices** through education and training.
- Promote **DMSMS case resolution data sharing** to facilitate creation of an internal benchmark that may be used by Program Managers and to establish meaningful performance benchmarks by Performance Based Logistics providers.
- Promote **sharing information about progress against the strategic plan**, highlighting those areas that need to be continued and those areas that need to be de-emphasized.
- Identify or develop, as necessary, **specific contract language templates** beneficial to the Services' DMSMS programs.
- **Accumulate and share examples** of accomplishments, best practices, success stories, and performance data attributable to the efforts of the Working Group.
- Develop and provide **metrics pertaining to the effectiveness** of the DMSMS programs.
- Charter, provide leadership and guidance, and **provide necessary resources to sub-groups for ad-hoc tasks** required to meet the goals and objectives of the DMSMS WG.

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Current Planning Draft
For Discussion (continued)

- **<u>Vision</u>: Mitigate the occurrence and impact of DMSMS issues by strengthening the supportability, efficiency, and effectiveness of the Department of Defense weapon system programs and operations.**

- **<u>Mission</u>:** The DMSMS Program provides policies; techniques, tools, and training that promote and facilitate pro-active DMSMS management practices across all Services and Agencies. DMSMS analysis, forecasting, and resolution methods are successfully applied throughout the life cycle, resulting in the most affordable solutions with no decrease in system availability due to mitigation activities.

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Current Planning Draft
For Discussion (continued)

- **Primary Set of Goals Drawn from Existing Plans:**
  - **GOAL 1:** Promote effective DMSMS management to improve the availability and affordability of defense systems
  - **GOAL 2:** Ensure a sufficient and well educated DMSMS Workforce
  - **GOAL 3:** Develop a complete and collaborative DMSMS enterprise serving U.S. and Coalition Forces
  - **GOAL 4:** Promote best practices across Service and Agencies

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Current Planning Draft
For Discussion (continued)

- **Another Set of Goals: Extending DMSMS into Systems Engineering Community**
  - **GOAL 1:** Ensure that SE Design Trades Consider DMSMS Concerns
  - **GOAL 2:** Reach Out to Program Managers and Senior Leaders Regarding the Importance and Benefits of a Proactive DMSMS Approach
  - **GOAL 3:** Improve the Early Identification and Dissemination of Potential DMSMS Issues and Warnings
  - **GOAL 4:** Improve the Methodological Foundation of the DMSMS Risk Management Process

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Current Planning Draft
For Discussion (continued)

- **Composition of the Full Planning Document:**

  GOAL 1: Promote effective DMSMS management to improve the availability and affordability of defense systems.

  - **Objectives:**
    - Formulate recommendations to DoD Policy and procedures to reduce DMSMS impacts and encourage aggressive, proactive management of DoD materiel by DoD and Industry.
    - Ensure that Acquisition Strategies include a DMSMS Plan and that review of the plan is part of the Milestone review process.
    - Develop and advocate specific contract language necessary to promote Program Manager authority and responsibility for DMSMS management.
    - Identify mechanisms to capture and monitor metrics for availability and affordability resulting from DMSMS practices.
    - Describe specific instances within the System Engineering (SE) Process which require application of DMSMS predictive methodologies in partnership with SE.
  - **Means / Strategies:**
    - Insert DMSMS checklist into PSR
    - Publish Contract language for Section L / Section M at Defense Acquisition University (DAU)
  - **Performance Measures / Indicators:**
    - Checklist use at PDR and CDR Reviews
    - Contract language used, taught at DAU courses

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DMSMS Influence in Systems Engineering

- **Program Support Reviews (PSR). PSRs are lead by SE and include review areas such as acquisition, sustainment, and test that need to be reviewed prior to milestone decisions.**
  - DMSMS is only mentioned in three questions, essentially the same question in three different phases: Do you have a DMSMS Plan?
  - PSR's identifies both risks and strengths.
- **Defense Acquisition Guide Chapter 4 looking at DMSMS and Parts Management – guidance is needed to show the differences between the two areas. A Parts Management plan is identified and a time is specified as to when it needs to be completed.**
- **Systems Engineering Plan and Life Cycle Sustainment Plan – need to ensure that DMSMS are in both of them**
- **Technical Reviews to technical baselines need to include DMSMS**
  - What DMS tasks or items should be addressed?
  - What are tasks that should be completed prior to MS B (design considerations, open systems, modular designs)?
  - Need to know how to measure at PDR and CDR – need quantitative measures
- **Develop a lifecycle cost model to clearly show design and acquisition decision trade-offs while going through gate reviews.**

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Fundamentals / Policies

- **Develop best practices for DMSMS mitigation plans for inclusion in Systems Engineering Plans**
- **Develop and share strategies for dealing with DMSMS issues**
- **Evaluate program DMSMS plans**
- **Evaluate Service implementation of DMSMS policies and strategies**
- **Select parts to reduce the likelihood of DMSMS**

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Way Forward

- **Develop, implement, and maintain DoD DMSMS Strategic Plan**
- **Develop robust DMSMS risk mitigation plans**
- **Monitor progress of DoD Components**
- **Implement a rating scheme to measure the degree of pro-activeness**
- **Update SD-22, DMSMS courses and Knowledge Sharing Portal**
- **Conduct conferences, workshops, and achievement award program**

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Food For Thought

- **Does the Vision / Mission Capture the Changes we are Trying to Institutionalize?**
- **Should Goals / Objectives be Prioritized?**
- **What Level of Goals / Objectives / Tasks / Measures Should be Present in the Strategic Plan, Versus Implementation of the Plan? (Since Strategic Plans are More Enduring – 5 Years)**
- **Should Goals Follow Organizational Structure?**
- **When do We Declare Success and Move On?**
- **What Form of DoD / Joint Service Goals are Valid, in an Environment Where Most (Funded) Efforts are Single Service?**
  - Should There be “Lead Services for Goals?”
  - Should There be Tracking of Objectives for Each Service? All Services?
  - Does Any Single Service Have a Strategic Plan?
  - What is the Participation Levels for Formal Measurement Against Goals for Each Service?
- **Who Will Sign this Plan Out?**

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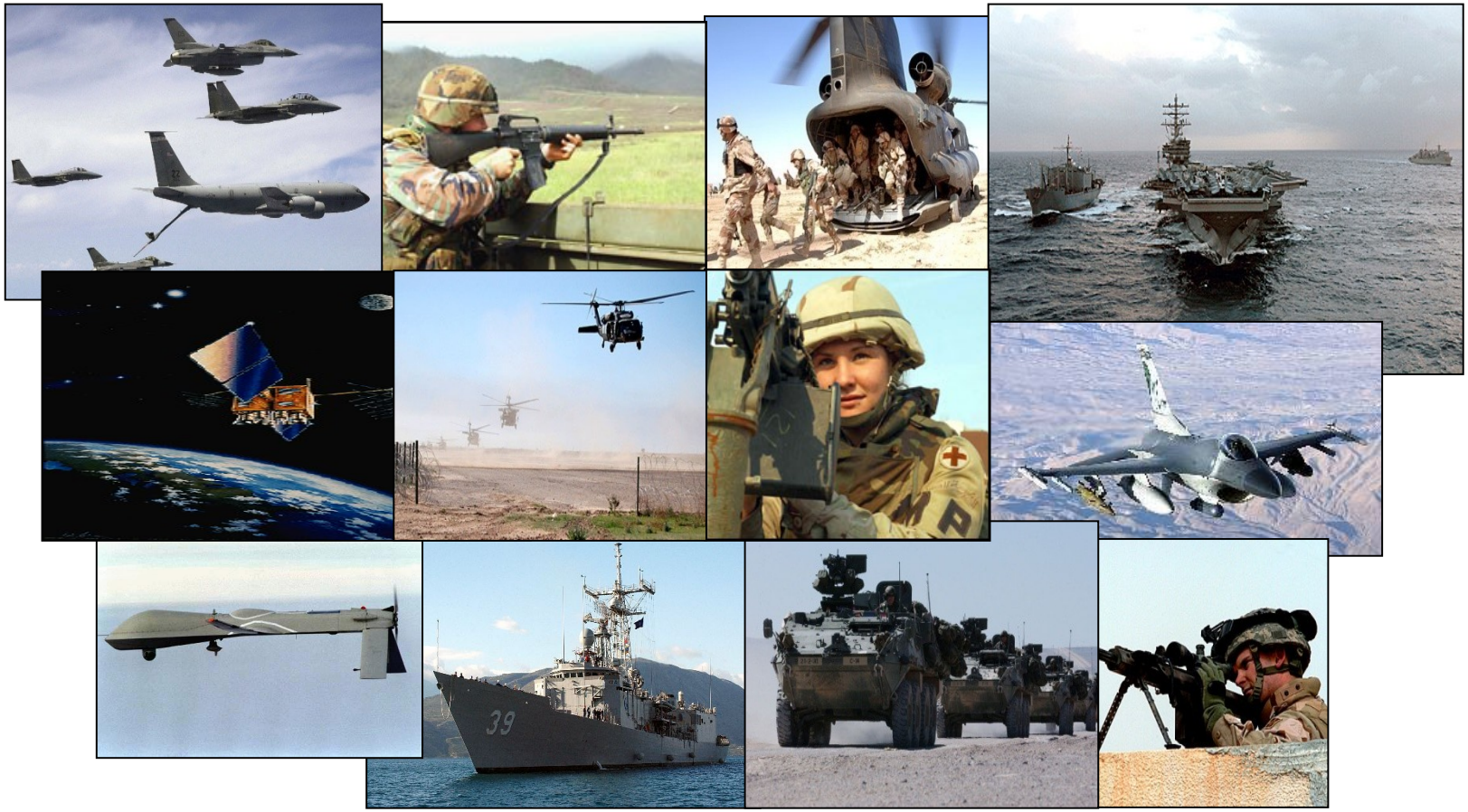
Pro-active DMSMS Management Critical to Program Support



Innovation, Speed and Agility

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